

REMARKS

Claims 1-15 and 19-32 are pending in the present application.

The claims are believed to be allowable for the reasons set forth herein. Notice thereof is respectfully requested.

Election/Restrictions

Claims 16-18 and 33-36 are cancelled in compliance with the restriction requirement.

Claim Rejections - 35 USC § 103

Claims 1-15 and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinard et al. (US 5,837,121) in view of Ball et al. (US 4,481,083).

Kinard et al. is cited as teaching a method for preparing an anode plate for a capacitor including the steps of fabricating an aluminum plate and contacting the plate with an anodizing solution comprising glycerin, low amounts of water and 0.1-15 wt% dibasic potassium phosphate.

As pointed out by the Office Kinard et al. fails to recite pre-hydration and fails to recite anodization to high voltage.

Ball et al. is cited as disclosing a pre-hydration step and it is the position of the office that one of skill in the art

would combine the pre-hydration step of Ball et al. with a high water version of Kinard et al. and anodize to a high voltage to achieve the claimed invention. Applicants respectfully disagree.

The Office has stated that Kinard et al. teaches between 0.1 and 2.0 wt% water due to the inherent absorption of water from the atmosphere. Applicants respectfully disagree. Kinard et al. specifically states in the abstract and in the Summary of the Invention that the electrolytic solution has less than 1000 ppm water. Kinard et al. states in col. 4, line 57 that less than 900 ppm is preferable. Clearly the use of water is discouraged in the teachings of Kinard et al. In col. 3 lines 31-40, Kinard et al. teaches against the use of polar solvent-based electrolytes due to the difficulty in maintaining them in an anhydrous condition and the factor of three difference in oxide thickness per volt with a 300 ppm increase in water. In contrast to the position of the Office, Kinard et al. teaches a water content below that recited in independent claims 1 and 19 and any claim depending therefrom.

Paragraph [00011] of the present invention describes the expected disadvantages of pre-hydration. In summary, the subsequent dehydration is hypothesized to liberate oxygen gas which is trapped in the anodic oxide thereby rendering the oxide

susceptible to cracking and dielectric failure in service. One of skill in the art would therefore avoid pre-hydration.

Ball et al. further describes the issues related to a pre-hydration step. In col. 1, lines 41-47, Ball et al. details that a high voltage dielectric is unstable due to instability of the oxide film. This problem is most markedly observed when the foil bears a hydrous oxide prior to anodization.

Ball et al. recites the conditions under which pre-hydration could be considered. The hydrous oxide layer must be stabilized by immersing in an aqueous bath comprising 10-120 g/l boric acid and 2 to 50 ppm phosphate.

In summary, Kinard et al. teaches against water in the electrolyte and Ball et al. teaches against a pre-hydration step except to the extent that it is stabilized with an aqueous boric acid solution. Applicants respectfully submit that one of skill in the art would have no motivation to utilize the pre-hydration step of Ball et al. with a low water content electrolyte since the solubility of boric acid would be limited. Even if such a hindsight reconstruction were considered they would be expected to minimize the water content when utilizing glycerine and orthophosphate based on the teachings of Kinard et al.

Applicants respectfully submit that there is no motivation, except hindsight, for combining Kinard et al. and Ball et al.

Even in hindsight the combination would be expected to fail due to the reduction in film breakdown voltage if the claimed level of water were used. Alternatively, the anode would be expected to be susceptible to instability if residual water is not stabilized by boric acid. Kinard et al. and Ball et al. are mutually exclusive teachings and one of skill in the art would have neither motivation nor suggestions of undertaking the effort necessary to attempt to resolve the opposing teachings contained therein.

The rejection of claims 1-15 and 19-32 under 35 U.S.C. 103(a) as being unpatentable over Kinard et al. (US 5,837,121) in view of Ball et al. (US 4,481,083) is traversed. Notice thereof is respectfully requested.

CONCLUSIONS

Claims 1-15 and 19-32 are pending in the present application. All claims are believed to be in condition for allowance. Notice thereof is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. T. Guy', is written over the typed name and title.

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